DOCUMENT RESUME

ED 079 895 EC 052 273

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TITLE Personality and Social Development of Handicapped Children.
PUB DATE [72]
NOTE 43p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Exceptional Child Research; Family Attitudes; *Handicapped Children; Interpersonal Relationship; *Observation; Regular Class Placement; Research Methodology; *Research Needs; Research Reviews (Publications); Social Attitudes; *Social Psychology

ABSTRACT

Discussed are the personality and social development of children with physical handicaps, intellectual difficulties, or social and emotional disturbances, and recommended is the actual observation of the interactions of handicapped children with others in naturalistic situations. Stressed is the importance of pathological social interactions to handicaps such as schizophrenia and behavior disorders. The authors note a lack of studies of social interaction in naturalistic situations and examine methodological approaches such as the use of audio or tape and problems such as the choice of variables and interpretation of rating scales. Reviewed is research on interaction patterns in families of schizophrenic patients with findings such as the "double bind" pattern and differences in affect expression. Also reviewed are studies on the attitudes and social reactions of handicapped and normal Ss. Noted is the need for an effective test of social adaptability to aid in the diagnosis and management of mental retardation. The authors cite research on the self esteem of handicapped children with normal children is preferable to alternatives such as institutionalization. (DB)

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PERSONALITY AND SOCIAL DEVELOPMENT OF HANDICAPPED CHILDREN

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Psychologists' and educators' conception of handicapped children has changed markedly in the last decade. At one time the study of exceptional children was neatly subdivided into discussions of the blind, the deaf, the mentally retarded, the physically handicapped, the gifted and the emotionally disturbed. The present viewpoint is different. For one thing the recognition that so many handicapped children are in fact multiply handicapped has tended to individualize the study of the handicapped child. Each child is a unique person with his own spectrum of handicaps and his own problems in coping with the demands of the world. For another thing, we have come to recognize that many of the problems faced by handicapped people are not strikingly different for people with different handicaps. The prejudices they face and the sympathy they receive are not fundamentally different whether the person is blind or walks with the aid of braces and crutches. Furthermore the reactions of a blind child to being overprotected by his mother, if that is her response to his blindness, is not vastly different from the reactions of any child in an overprotective home. Thus the whole array of physical handicaps, emotional disturbances and normal adjustments are seen merging imperceptibly into one another while each child is viewed as an individual coping with his individual prolems.

The traditional view of compartmentalized disturbances and handicaps probably reflected the influence of the medical model of disease which lead to such tremendous accomplishments in the development of diagnosis and treatment of disease, but which is gradually being replaced even in physical

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medicine by a more interactive point of view. Medicine traditionally considered disease to be a disease of the individual which reflected some malfunctioning of his body. One task for medicine was to develop diagnostic procedures for testing the individual for disease. A second was the development of therapies for treating disease and immunizations for making the individual resistant to disease. Guided by this conception, medicine developed a tremendous armamentarium of clinical tests and a materia medica of agents for treating disease which have conquered many once terrifying diseases like pneumonia and poliomyelitis.

It was only reasonable that the same strategy would be employed in the attempt to understand and control psychological disturbances and the strategy was by no means fruitless. Various psychological syndromes have been described and psychological tests developed to help diagnose mental illness, but the effort was never as successful as it had been in physical medicine. Goldfarb (1970) in a recent review of psychosis in children concludes with an assessment of current diagnostic procedures.

> "This review of current progress in etiological understanding of childhood psychosis emphasizes that the primary requirement for scientific investigation and evaluative research is a meaningful subclassification of children who are presently included in the broad class of psychotic children." (Goldfarb, 1970 p. 818)

Modern medicine, without renouncing the value of syndromes and individual therapy has faced problems which require a much more interactive viewpoint in which the individual characteristics and the environmental hazards are seen as both contributing to malfunctioning of the organism and the methods

for achieving control may be focused on the individual or the environment or both. Allergies involve the interaction of a susceptible or vulnerable organism and the presence of the appropriate allergen. To control one allergy we spray parks to get rid of poison ivy and try to inoculate people who are especially susceptible to it. Other diseases are thought of as caused by an agent constantly present in the body, but leading to overt illness only at times when the person has a lower resistance than normal. Some symptoms, like fever, and a high white blood cell count are part of the organism's coping with infection and is common in all infections; other symptoms are indications of the disease itself.

It seems as if in the realm of psychological disturbances, these complicated interactions between the individual and his environment are very common, but well defined syndromes whose identification leads to effective treatment are relatively rare. They do exist; Wender (1971) for example argues strongly for a MBD syndrome whose specific treatment is amphetamine. But generally speaking, psychological problems involve a vulnerable organism interacting with a sort of "allergenic" environment which leads to a deterioration of interpersonal relations. On top of this etiological interaction, the presence of a handicap or an overt psychological disturbance creates social reactions which often are more difficult to cope with than the handicap itself. These social responses to handicaps and their effects on the individual constitute the subject matter of somatopsychology (Wright 1960).

This broadening of the perspective on the exceptional child opens the way for meaningful research by social scientists. Handicapped children have often been viewed from the point of view of treatment of their special problem, and thus of interest primarily to the investigator in special education or physical

therapy. Now individuals with handicaps can be viewed as adaptive organisms within an environment. Their problems and coping mechanisms can be investigated by the methods of social science. Not only will these methods be helpful in understanding exceptional children, but helpful to social science as well because the special problems of the handicapped child may be natural experiments with important theoretical relevance to social psychology.

In this chapter we will be concerned with the personality and social development of children with physical handicaps, intellectual difficulties or social and emotional disturbances.

Relation of pathological social interactions to handicap

We will argue that a very promising research strategy is the direct observation of the child interacting with the significant people in his environment, and we will discuss in a later section the problems involved in such observational studies and how various investigators have coped with them. First however we should recognize that the child's pattern of social interaction may be related to his handicap in various ways.

In some cases the pattern of social interaction is the disturbance itself. Hyperactivity, fidgetiness, and short attention span are part of the MBD syndrome. Autism is itself a behavior pattern. The careful description of the child's social interaction, like Bleuler's naturalistic observations in mental hospitals (1911) is important for the discovery, identification and labeling of behavior syndromes.

In some cases the social interaction of the child is best described as the reactions of other people to his handicap. It is a consequence rather than a cause of the primary problem. Some people adopt this position in an extreme form, which says essentially that the disease is only society's label and is

a disease only by definition. They argue that all psychopathology is nothing more than idiosyncrasy, that the forms of thought called disordered by psychiatry are merely unusual, certainly not more disordered than conventional forms of thinking and possibly much healthier. The label "sick" that is assigned to such psychoses or disturbances is an expression of conventional society's discomfort with such untrammelled thinking.

Taken in this extreme form, the viewpoint is certainly incorrect. Certainly there are individuals, most strikingly the profoundly retarded, who could not function in any society effectively and would have to be taken care of--or disposed of as in some cultures. Similarly there are psychoses which are completely incapacitating and other forms of psychopathology that are very distressing to the individual and may lead to suicide. But in a milder form this point of view has strong support. Laing (1967) believes that schizophrenic episodes, while necessitating the care of the patient, are struggles for health and are symptoms of adaptive mechanisms, not symptoms of disease--and in many cases the disease itself is less in the patient than in the environment that imposed it on him.

When we move from adult psychosis to childhood disturbances, it becomes even more difficult to label the patient sick and to identify just what symptoms describe his illness. Kanner (1960) for example has said that it is not so much the symptoms themselves as their annoyance value to the family of a child that determine whether he is referred to a clinic. Shepherd, Oppenheim and Mitchell (1966) found that clinic and non-clinic children did not differ much in the prevalence of symptoms of childhood disorders like fears, tantrums, hyperactivity etc. What did differentiate the clinic from the non-clinic population was the amount of anxiety such behavior generated in the mother.

One recent attempt to establish the importance of social expectations in the development of the child has been Rosenthal and Jacobson's study, Pygmalion in the Classroom.(1968). Rosenthal gave teachers false information about some of the students in their classes. These students were reported to have revealed unusual potentiality for intellectual growth in an examination given by the experimenters. The children, thus singled out, were in fact merely a random selection from the class, but sure enough by the end of the year these children had fulfilled the prophecy made for them in the fall. The only basis for such growth seems to have been some consequence of telling the teacher that the children showed promise. An additional study of this sort (Rothbart et al 1971) used teacher trainees as the instructors in an experimental situation. They were also told that two of the students had more academic potential than the other two. The teachers paid more attention to the high expectation students and those students talked more as a consequence.

Rosenthal and Jacobson's experiment has been severely criticized, largely on methodological grounds. Thorndike (1968) points to the near impossibility of some of the reported test scores, both pretest and post-test. He does not quarrel with the conclusion except to say that Rosenthal's data provides no evidence for it.

Despite these criticisms, there is good reason to think that the basic hypothesis is true. After all Rosenthal exerted only a mild influence on the teachers by comparison with what happens in ordinary circumstances where a child's record is available to the teacher, where he may have been the subject of discussion between his old and new teacher, and in serious cases where he has a firm reputation that precedes his actual appearance in a class. In such circumstances a diagnosis of "mental retardation" or "minimal brain

damage" or "autistic" must exert a powerful influence upon the teacher's handling of the child. If the diagnosis is accurate this influence may be beneficial. The teacher may make allowances and put less pressure on the child and this may be just what he needs. On the other hand if the label is premature--and from what we know about changes in I.Q. over time and the fallability of soft neurological signs it must be premature in a fair percentage of cases--then it may really hamper the child's learning. If a child is mongoloid, then his physical appearance itself may label him. While many mongoloid children do seem to be seriously retarded, the fact that some of them do develop into the normal range of intelligence (Hunt 1967) (Seagoe 1964) suggests that some others who might have done so were hampered by the common conception of the mongoloid as a hopelessly retarded individual.

The pattern of social interaction of the handicapped child with his environment may, then, be primarily the reaction of other people to the handicap and may reflect little about his own characteristics.

In most cases, however, the pattern of social interaction is the end result of a history of interaction, in which the child's own characteristics have been influential and in which the pattern of handling by his family has also been very important.

Thomas, Chess and Birch present this viewpoint very cogently and can support it with empirical data (1968). This research team followed the development of 128 children from birth, paying particular attention to the development of behavioral disorders. Through careful interviewing of the mother they rated each child on nine temperamental variables which combined into three major clusters or syndromes. The babies in one group were "easy babies", adaptable, happy and predictable. A second group is labeled "slow to warm up". A third group was labeled "difficult" because the babies found

it hard to adjust to schedules and changes in schedule; they fussed a lot, had intense feelings and did not apparently enjoy people. These children were the most likely to develop behavior disorders requiring psychiatric referral, and the deviant behavior antedated the development of actual symptomatology of disorder. But not all difficult children developed disorders, nor were all the disorders from this group. The important additional factor was the parental reaction. Even a very difficult child might develop normally if the parent was able to be warm yet firm, patient, and consistent, while easy babies might develop disorders if the interaction with the parents took an unfortunate turn. Meyers and Goldfarb (1961) report data that is consistent with this interactive hypothesis. Psychotic children who showed clear signs of brain damage had, on the average, parents who were less disturbed than psychotic children who did not show any evidence for organicity. In other words brain damage may predispose the child to develop a psychosis, even when the parental behavior is normal, but in the absence of such a predispostion a more seriously malfunctioning parent-child relationship is required for the development of psychosis.

Such findings as these point clearly to the importance of describing the parent-child interaction in more detail. The term <u>difficult</u> is a sort of general summary of the child's early behavior, but of course what makes a child difficult for one parent does not make him difficult for another.

In the Thomas, Chess and Birch study, the "difficult" child was temperamentally deviant and the behavior disorder could be seen as an outcome of the early predisposition. Children who are physically handicapped may also be difficult burdens on the parent even in the absence of any temperamental irritability or unadaptiveness. Thus such children are vulnerable to the development of behavior difficulties that are quite unrelated to the handicap.

An auditory defect may make the child so difficult to communicate with that the mother ends up shouting in the child's face and dominating him so unmercifully that he adapts by "turning her off" and thus puts still another barrier between himself and his environment. This sort of vicious circle of interaction is common in the development of behavior disorders.

Since all handicaps create problems for the child's family as well as for himself, the resultant interaction patterns may be similar for different handicaps and different for similar handicaps if the quality of the interaction reflects the pattern of social adaptation more than it does the original handicap. On the other hand investigation might well show that a particular handicap creates a particular kind of burden which some families find especially difficult and thus predispose the child to the development of a particular disorder. Careful study of the mother-infant interactions of children with different handicaps might thus specify the potential problem more explicitly and point to the possibilities of special preventive measures.

In later sections research issues relevant to each of these points of view will be discussed, but they all depend upon the description and analysis of social interaction. The following section is, therefore, a digression of sorts; it will discuss the general problems of describing social interaction, and some of the methods that have been developed in social psychology and sociology for investigating the problem.

The study of social interaction in naturalistic situations

In view of the fact that the primary task of social psychology is to understand and explain the social behavior of the individual and since social behavior is in fact social interaction between people, one might think that there would be many investigations of the actual interaction of people in various kinds of situations that typify the social interactions of everyday life. As a matter of fact, however, the bulk of social psychological research

has been the study of the statistical relationships between distant variables like warmth of the home and conscience development (e.g. Sears, Maccoby and Levin, 1957), social class and mental disease (e.g. Hollingshead and Redlich 1958, Kohn 1968). These are called distant variables because their relationship must be mediated by chains of intermediate events. Poverty does not directly cause mental disease, its positive correlation must depend on what goes on in poor families, perhaps malnutrition, lack of good prenatal care, frustrations built up over being unable to get one's share of life's rewards, (see Freedman 1962) or perhaps certain patterns of child rearing that are common in poor families (e.g. Radin and Kamii, 1965 and 1967).

While the establishment of the fact that members of poor families are more vulnerable to schizophrenia than people in middle and upper socio-economic status is important, such a finding really only poses a problem rather than answers it. The answer must partly depend upon the actual study of the events in the lives of poor families, what they eat, how children are treated, what medical care they get and how family members interact with each other.

Some recent research shows how such studies may change the picture. The fact that lower economic level negro children have on the average lower I.Q. test scores than white middle-class children is well established. This is a relationship between distant variables. Without adequate evidence, some social scientists began to describe the negro ghetto home as disordered and disorganized, in which mother-child interaction is impoverished, and so seriously lacking language resources that children could not talk in complete sentences by the time they entered school. No wonder they failed so badly in school. The facts of low I.Q. test scores and school failure are undeniable,

but the remainder of the picture which fills in many hypothetical mediating factors to connect the distant variables has been shown to be wrong. The Baldwins (1970) recorded and described mother-child interaction for a sample of families born in west Harlem and a white upper-middle class largely academic families. The actual observation of mother-child interaction was very revealing. While there are some quantitative differences between the two samples, they do not confirm any of the hypothetical descriptions. Mother-child interaction was not less frequent or intense in the Harlem mother-child pairs; the mother's language resources as evidenced in an interview were the same as those of the white mothers. While the language used by mother and child in playing together was somewhat less complex in the Harlem sample, it was not dramatically different. The whole picture of the Harlem family interaction is changed and put into perspective when it is actually observed even if there are statistically significant differences between ghetto homes and white middle-class homes.

Such facts as these make it essential to study social interactions directly in naturalistic situations and make it surprising that such direct studies are not common. It is not as if these social interactions are unobservable. The causal chain that connects trisomy of chromsome 21 with mental deficiency in mongoloid children (Lejeune, Gautier and Turpin 1959) requires the development of elaborate biochemical methods but social interactions are not hidden in the synapses between neurones; they occur out in the open where they can, in principle, be directly observed.

The importance of naturalistic studies and the fact that they have not been frequent, particularly in studies of exceptional children makes it worthwhile devoting some space to the discussion of the methodology of such studies.

The process of observing social interactions in naturalistic situations can be conveniently divided into three steps. The first is the obtaining of

a record of the interactions; the second is the coding of the events of this record in terms of the variables that are under investigation, and finally the analysis and summary of the interaction in terms of these variables. When this process has been completed for a sample of units, be they individuals, mother-child pairs, families, small groups or whatever, the usual statistical methods are available for testing the relevant differences, or relationships.

The record may be an audio or video tape of the interactions or the recording and coding may be consolidated so that the observations result in a more or less completely coded record. In some studies the observer uses a predetermined coding system so that the only record of the interaction is a set of codings. Bales' coding of interactions follows this strategy (1950). Bell has developed a check list for the observation of infant interactions (1971). The coding of doll play used by Sears is another example (1951).

Another strategy is to make a running record of the interactions, written in ordinary language. This may be dictated on the spot (see Baldwin and Baldwin 1970) or reconstructed from memory using notes taken on the spot (Wright 1967). An ordinary language record of the interaction is partially precoded because many of the words in ordinary language like commands, encourages, tries or forbids are interpretations of actions requiring human judgment. In most cases, this verbal description must be further coded before a completely coded record is obtained. The Baldwins have devised an Interactional Language, a slightly restricted ordinary language, in which the observer describes the interaction. The observer's record can then be coded automatically by a computer program (Ward, 1971). In still other studies, when an electronic recording of the verbal interaction of participants is obtained, this record is then coded by observers of the record.

The choice of what method to employ in producing a coded record depends

upon various considerations.

1. What and how many variables are to be assessed. Linguistic variables essentially require an electronic record that can be listened to over and over again (e.g. Brown 1964). The same is true of most "molecular" variables. If ordinary molar events are being studied, the choice partly depends on how many different variables are needed. If there are only a few easily observed variables, on the spot direct coding is possible and is very efficient. Chapple's (1940) interaction chronograph is a good example and the coding for Interaction Process Analysis can also be done on the spot. Such codings can be fed directly to the computer (either electronically or by human transcriber) for rapid and efficient analysis.

The number of different variables that can be directly coded on the spot is not firmly established and depends on how much interpretation is required. The Baldwins argue that an observer dictating a description in ordinary language can effectively code many more variables than the observer with a check list because he is using a coding system that is very familiar and well practiced. By computer analysis of such a record, the method approaches the check list in rapidity and efficiency of analysis. For a study requiring assessment of many subtle variables and the making of fine distinctions, the human coding of an electronic record is probably advisable. An additional advantage of coding a video record is that maximum reliability of coding can be maintained. The most serious disadvantage-and it is serious--is that it is very time consuming. Anywhere from forty to four hundred hours of coding may be required for every hour of recorded interaction. Some procedures for adequately sampling the complete interaction are often indicated.

2. The theoretical convictions of the investigator are important in the choice of a method, particularly how much the investigator believes that

the variables should be strictly behavioristic with a minimum of interpretation, or that such purely behavioristic descriptions lose all the meaning of the interaction. Generally speaking the less the interpretation the easier the coding except that molecular variables like eye movements may be almost impossible to code at all from direct observation. The arguments on each side of this controversy need not be reviewed here. For what it is worth, the authors believe that the observer must interpret what he sees to make it meaningful, but that this interpretation should be at a level of "naive psychology" (see pp 27 and 28).

3. Finally practical considerations may dictate the choice of method, for good or for bad. Video recording of wide ranging behavior on the playground takes on the dimension of a Hollywood film production. Where the presence of the observer is a problem, electronic recording may be either less obtrusive or more disturbing, depending on the situation. Generally speaking social psychologists are probably more concerned about the distorting effects of an observer than is realistic.

Thus far the discussion has centered on the process of recording and coding a segment of social interaction. Another problem is the consideration of the recorded segment of interaction as a sample. One may consider a half-hour play period where the mother is asked to play with her child as naturally as possible in either of two ways. It might be thought of as an actual sample of the totality of the mother-child interactions or it might be thought of as sort of experimental situation in which interesting mother-child patterns of interaction are revealed. Clearly this particular segment of interaction is best thought of in the latter sense; different mother-child pairs to reveal differences in the playroom, the same mother-child pair behaves differently as the child grows older (Baldwin and Baldwin 1970); disturbed

mother-child pairs behave differently in the playroom from normal mother-child pairs.

But what goes on in the playroom cannot be taken as a representative sample of the total mother-child interaction. There were no other siblings present; the father was not there; there was no possibility for the mother to be washing dishes or doing any of the chores that would occupy her at home. When it is important to obtain a really representative unbiassed sample mother-child interaction in which the distribution of various types of behavior will be the same as they would be if one recorded all mother-child behavior for a year, then something like the full day specimen record (Barker and Wright 1951) is required and even here the sampling problems were not all solved.

For some purposes the social interactions under consideration may be entirely absent in the detailed observations of parent-child interactions. Bronfenbrenner (1970) for example describes some major distinctions between parent-child interaction in the Soviet Union and the United States without ever talking about the variables that would be coded from a sample of playroom interaction. He speaks in the U.S. of the relative absence of the father, the child's lack of contact with the father's job, the time the mother spends being a chauffeur, and other such descriptive variables. To obtain a picture of what the child's total pattern of interaction is, the environment must first be described in these broad brush strokes, and then when it is important the interactions within these broad settings can be described in more detail. Barker's work on the description of environmental settings (1968) probably provides the most systematic methods for describing the over all distribution of the child's interactions with other people and the institutions in his total environment.

The investigator thus has many choices in studying social interaction, and for different problems, different aims, strategies, and methods are appropriate. What is most important, of course, is that the investigator be clear about what he is studying and why.

The methodology of social interaction studies should not be left without some discussion of rating scales. Probably more scientific information about the behavior of people in naturalistic situations has come from ratings of that behavior, either by special observers or by other participants in the naturalistic setting than from any other method. The relation between ratings and observational records of social interaction is not always clear. Some ratings may be thought of as summary statements made by the observer. These summary statements could be verified or disconfirmed by actual counts of frequency of various types of interactions. Thus the cue points for some scales are statements such as "frequently irritated by other people". The analysis of social interaction would lead directly to such summary statements.

Other rating scales like warmth or democracy in the home cannot be so directly related to the ongoing stream of behavioral interaction. Such judgments can be made reliably under favorable circumstances and must in some way be related to the actual behavior observed. One of the tasks of analysis of behavioral interaction records is to find the cues that in fact lead to such observer's judgments, but the relationship is not obvious. The behavior record is primary data and if it is complete should contain all the evidence for the judgments called for in rating scales. One of the tasks of behavioral analysis is to find the cues on which observers' judgments are based. It is important not only for methodology but also for theory. Social learning theory for example is couched in terms of acts. The important research of Sears, Maccoby and Levin (1957) or Bandura and Walters (1959) finds empirical

relations between variables like warmth and personality development but unless warmth is behaviorally defined the empirical relationship cannot be expressed in terms of the theory.

Without in any way deprecating the findings of studies using rating scales, it does seem that their meaning will become clearer through the analysis of the stream of social interaction.

Interaction patterns in families of schizophrenic patients

There has grown up a respectable body of research using the analysis of interpersonal interactions between the family members of schizophrenic patients. The impetus for this research came from Gregory Bateson's (1956) description of the "double bind" that he observed in the interactions of parents and schizophrenic children and which led to the term "schizophrenogenic" to describe the interaction patterns in a family that produce schizophrenia in the children. The double bind is a pattern of interaction in which the child receives two incompatible messages from the mother, e.g. to be dependent on her and also to be independent and non-demanding. The major investigators in this area are Goldfarb (1965), Wynne and Singer (1967a, 1967b), Farina (1960), Lidz (1965), Lennard (1965), and Mishler and Waxler (1968). The records of interaction have been obtained from family discussions of topics specified by the investigator, conjoint family therapy sessions or family interviews, or family interactions when the family must produce a joint or consensus response to a projective test like the Rorschach (Loveland, Wynne and Singer 1963).

The most careful study in this group is the study by Mishler and Waxler. They recorded the conversation of triads, the mother, father and child. The child was in some samples a normal child, in others a schizophrenic with a good prognosis as indicated by his premorbid history, in

others a schizophrenic with a bad premorbid history, and for every schizophrenic child, there was also a session in which the mother and father talked with a non-schizophrenic sibling of the schizophrenic child.

The conversation was elicited by the "revealed differences" techniques first introduced by Strodtbeck (1958). Each member of the triad responded independently to a number of potentially debatable questions not dealing directly with the family itself.

An example of such a question is:

> "A foreman sees one of his crew taking some company materials home with him. Should he report it or should he just ignore it. Report him_____.
> Just ignore it_____."

Inevitably the family members did not always answer the questions in the same way. The experimenter would select items on which there was disagreement and present to the family group the individual answers.

Perhaps the mother and father both answered "yes" while the child answered "no". The experimenter then asked the family to discuss the question and try to come to a consensus on it, but a consensus was not required. A session consisted of discussing nine such disagreements, selected so that each member of the triad is originally in the minority on three items.

These discussions were recorded on audio tape, carefully transcribed to retain all the interruptions, and periods of simultaneous speech. The target person for each speech was recorded separately by an observer who watched whom the speaker was looking at, or as in some instances, that he was not looking at anybody. The transcript was divided into unit acts consisting of every clause for some codes and into utterances of a single speaker for

other codes. The interactions were then coded in a number of different ways, for responsiveness, affect, focus, interaction process analysis (Bales 1950), interruptions, and who-to-whom codings.

The results are very complicated and can hardly be concisely summarized. In general, however, normal families were more expressive and the affect expressed was more positive but they were more similar to the poor premorbids than the good premorbids. In the normal families the mother and father interacted most with the father having the most power, but in pathological families the patient had a special role; often he and the mother dominated the interactions. Normal families showed more interruptions and simultaneous talking, an unexpected finding in the light of earlier studies. The normal families showed the most responsiveness to each other's remarks.

As the authors are well aware, one cannot be sure whether these patterns of interaction in the schizophrenic families are long standing patterns of etiological significance, or adaptations to the existence of a schizophrenic child. In order to investigate these questions, it will be necessary to study the interaction of families over a period of time before the child develops schizophrenia and determine whether the patterns of interaction discriminate between the families where the child does become schizophrenic and those where he does not. Since only some 2% of a random sample will develop schizophrenia it will be necessary to choose a vulnerable sample where schizophrenia is more likely. One kind of vulnerability is genetic, where one or both parents have had a schizophrenic episode. There are more than two possible outcomes for children genetically vulnerable to schizophrenia. A sizeable percentage show more or less serious disturbances short of diagnosed schizophrenia. (Heston 1968, Kety, S.S., Rosenthal, Wender and Schulsinger 1968) but also there are completely normal outcomes.

In some studies the investigators have found discriminable differences among families with a schizophrenic young child, those in which the disease appears in adolescence, and families with a child with other kinds of disturbance (Singer and Wynne, 1963). These studies however have not actually studied family interaction, but only the responses of the parents on various psychological tests.

It would be valuable to study the interaction process within families of children with various types of emotional disturbance and other types of handicaps. The revealed difference technique has proved valuable for eliciting conversation in many studies, but whether it is the best technique for families with disturbed children is not determined. For families with very young children, it would probably be unsatisfactory because of its verbal demands, but Loveland, Wynne and Singer (1963) have used the family Rorschach with young children. Other settings creating family interaction need to be developed. The interactions in families with older children can be captured reasonably well through the verbal exchanges, but for preschool children the non-verbal interactions in play would also need to be analyzed.

The study of family interactions in families with a schizophrenic child undoubtedly became popular because of their potential contribution to determining the etiology of schizophrenia, but we now know that a handicapped child, of any variety of from whatever cause creates a situation to which the family must adapt. Therefore such studies as these will be valuable in the study of families of all handicapped children. Barker for example, has contrasted the record of a full day's activity of a child with a serious heart defect with a normal child of the same age (Barker and Wright 1955). Farber (1959, 1960, 1968) has extensively studied the effects of a mentally retarded child in the family but many more studies are needed to understand the coping mechanisms of children and families and how they fit together. Some coping mechanisms

of the family may be very hard on a child and vice versa.

To record interpersonal interactions of handicapped children with members of their family or peer group is potentially a source of important data, but only if the investigator knows what features of the interaction are important. The fact that a child used the word "the" 275 times in a half hour play session with his mother is not likely to further our understanding of the problem except to indicate that he must talk quite a bit.

What is most valuable is a coherent descriptive theory of family interactions, with information about normally occurring patterns, so that studies of the handicapped child can be put into context.

One source for the study of interpersonal interaction comes from sociologists and the study of small group interaction. The sociological variables which are of interest are the varying roles of the different members, the relative power of different members, and the factors which keep the group functioning smoothly, working at the job assigned to it and not breaking up into warring cliques. One coding system that has been extensively used was devised by Bales and is called Interaction Process Analysis (1950). Bales' (1970) recent book integrates the findings from small group participation with personality information.

The Mishler and Waxler study previously described was analyzed from the point of view of sociological variables and other investigators of family interactions of schizophrenic children have also talked in terms of mother-son coalitions, have used frequency of talking as a measure of power, and in general followed the kinds of analyses used in small group studies. Chapple uses a very simple interaction measure, just the presence or absence of talking. The interaction chronograph consists of two buttons. Each is held down to make a record when the corresponding person is talking. The four combinations are one, the other, both or neither. Chapple (1940) has described patterns of

interaction characteristic of various kinds of disturbance. For a recent integration of his point of view there is "Culture and Biological Man."

There is a quite different approach to the description of interpersonal interactions, a more psychological description. Such a psychological approach leads to the description of interactions that are quite different from Mishler and Waxler's. For example, they never described how one member of the triad went about convincing the minority member to change his opinion, nor did they attempt to study the particular questions on which there were revealed differences and how this influenced the interaction. A focus on such topics leads to a different set of variables for analysis, not better but different and complementary to theirs.

A representative research program utilizing this psychological approach is that of the Baldwins (1970). They take as a premise that one person's interpretation of another person's behavior involves some tacit beliefs about human behavior, really an implicit theory of behavior. For example, a mother praised her child for completing a puzzle by commenting that he had done it all by himself. The belief that he would be pleased by such a comment depends upon an assumption that more ability is required to succeed without help than with help. Thus what she communicated was praise for his ability. And he, by age five, obviously understood what she meant.

This implicit common sense psychology has been described by Heider (1958) under the label of "naive psychology," utilized by the Baldwins as the theoretical basis of their description of mother-child interaction. Its basic assumption is that behavior is intentional, that this intention is lawfully related to the motivation of the actor, and that the success with which the intention is carried out is a function of the individual's ability and his effort. The naive theory of action is summarized in Figure 1. "P" represents the actor; "O" represents another person; and "X" represents some result

that P may or may not accomplish.

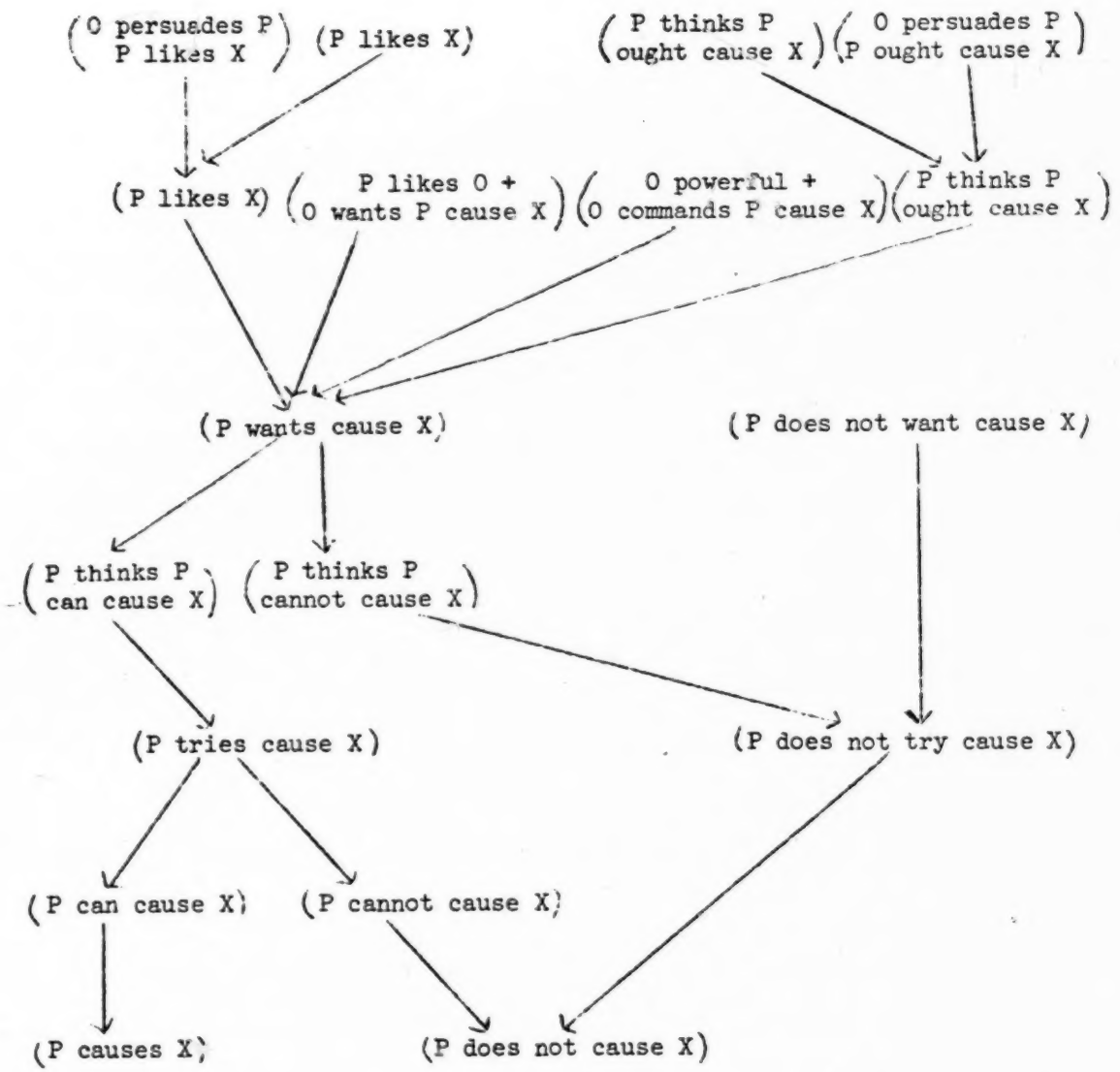
(O persuades P / P likes X)
(P likes X)
(P thinks P / ought cause X)
(O persuades P / P ought cause X)
(P likes X)
(P likes O + / O wants P cause X)
(O powerful + / O commands P cause X)
(P thinks P / ought cause X)
(P wants cause X)
(P does not want cause X)
(P thinks P / can cause X)
(P thinks P / cannot cause X)
(P tries cause X)
(P does not try cause X)
(P can cause X)
(P cannot cause X)
(P causes X)
(P does not cause X)

Figure 1

Assuming that ordinary people believe that such factors as these influence behavior, one can understand some of the techniques they use to influence each other. For example one person may try to persuade the other that some action is

in the other person's best interest, or he may try to convince O that he ought to do it, or he may ask it as a favor.

People do not expect that everybody will behave the same way. There is plenty of room for individual differences within naive psychology. For example one person is bossy and tries to command people to do what he wants; another is tactful and tries to persuade them. Both are understandable in terms of naive psychology. But people do expect that a person's behavior will be consistent with naive psychology and some kinds of behavior are not easily accounted for. Thus if A dislikes B and A benefits B, the behavior is a puzzle. The observer, trying to make sense of it in terms of naive psychology, may search for some disguised self interest behind the action, or possible some moral obligation. When a person's behavior becomes completely inexplicable within naive psychology, he is judged to be eccentric, peculiar, unpredictable, even frightening because he cannot be counted on not to suddenly turn hostile and destructive. One way society deals with such a person is to label him "crazy" and to stop trying to influence him through the usual procedures and to resort to physical constraints.

Insane people are not the only ones who do not behave in accordance with naive psychology; others are infants and very young children. There is, in fact, a sort of naive psychology of infancy, which assumes that some of the usual factors are operative in their behavior, but others are not. For example we attribute pleasure and pain to infants, but do not expect them to understand the threat of punishment and refrain from some behavior on that account.

As an infant grows he gradually acquires the ability to understand the naive psychological meaning of other peoples' actions just as he acquires the ability to construct and comprehend meaningful sentences. This socialization process is not well understood, even less well than the acquisition of language, to which it seems closely related. One part of the Baldwins' research program is directed toward the study of mother-infant interaction.

At any rate most children do acquire naive psychology in the first few years of life. But some children, for various reasons, do not develop normally and fail to respond as expected.

What may happen when parents have coped unsuccessfully with a child, and have not found him learning to respond to the ordinary social influences, is that they may give up and shift their whole conception of the child from that of a normal person into something infantile or even something not quite human. One mother for example treated her seriously distrubed four-year-old almost like an animal pet, physically petting him, even whistling to him.

Such a disturbed child is, of course, not like a normal child of his age and his behavior is not easy to understand. Skillful teachers, expert therapists, and wise mothers may gradually acquire an understanding of how such a child is different, and treat him in a way that capitalizes on what is normal about him and thus help him become more normal. What is difficult for mothers in such circumstances is that their (and our) naive psychology does not encompass the child's particular deviance from normality as it does the fidgety restless child, the day dreamer and run-of-the-mill problem child. Once outside the range of naive psychology, we are at a loss unless we have acquired some special understanding of particular kinds of difficult children.

Utilizing concepts derived from naive psychology the description of mother-child interaction that emerges from the Baldwins' study includes such variables as the following; for the mother and the child separately.

Number of non social acts

Number of social acts

a. Behavior requests

1. Type of act requested

a. physical b. mental c. effort etc.

2. Type of influence technique

a. requesting b. commanding c. coaxing d. persuading

e. begging etc.

3. Frequency of compliance

b. Information requests

1. What kinds of information

a. what b. where c. when d. why etc.

2. How frequently answered and how completely

c. Information giving acts

1. Types of information (see above)

d. Attempts to cause other person to feel

1. Types of feeling

e. Expressions of feelings

f. Requests for permission

It can be seen that these overlap with those from Mishler and Waxler but include some they do not try to measure and do not include some that they find important.

The Baldwin research project studying parent-child interaction where there is a clear pathology is not far enough along to report any clear findings, but preliminary analyses have indicated that on such variables as those listed above, there are striking differences in the moment-by-moment interactions between a disturbed mother-child relationship and one where it is relatively normal.

The Baldwins' project is merely an example of various studies of social interaction using a generally similar approach. Some of the others are Whiting's (1970), Caldwell (1967). Still others are more concerned with the formal interaction of the teacher with a whole class than the person-to-person interaction focussing on teaching methods (e.g. Flanders 1960).

Another strategy for studying social interaction was developed by Barker and

Wright (1955), adapted more to the analysis of interactions of the child with all the people in his environment. One of their central concepts is the "episode", usually much longer than a single act. Episodes are units of activity like "going to school," "playing baseball" or the like. These episodes break the child's day into reasonable size units, and then each episode can be coded to describe the type of activity, who were the child's associates, was the episode gratifying or frustrating, etc. etc.

The investigator who wishes to study the interpersonal interactions of disturbed or handicapped children with the significant people in their environment thus has a number of techniques from which to choose the one best suited for his purpose. The indications of available research are that such studies will be profitable, i.e. differences attributable to the handicap or disturbance will be found. Such studies can also be utilized to explore more thorougly some of the findings that already have established the relationships between such distance variables as social class, parental attitudes, and the child's attitude toward himself on the one side and mental health and personality adjustment on the other.

Social reactions to handicapped children

An earlier discussion suggested that some of the patterns of interaction between the child and the people in his environment may be due to the kind of expectations that disturbance ar handicaps arouse in other people. While there have not been many careful studies of such attitudes toward the handicapped child, the study of person perception has been investigated in social psychological research. Many of these same studies would be very useful in analyzing more carefully how people perceive and conceive of the disturbed or handicapped child.

Let us begin with one important investigation of opinions of handicapped children carried out by Richardson and his colleagues (1964). Many studies of social opinions collect data from the respondents' answers to a predetermined set of questions, but such a procedure presupposes considerable background knowledge about

what questions to ask and how to ask them. Richardson began with a much more open ended approach in a camp organized primarily for handicapped children but with about half of the campers not handicapped physically in any way. They came from the lower socio-economic levels. Richardson began by asking handicapped children and their non-handicapped camp mates a very open ended question, "Tell me about yourself" or "tell me about Jimmy or Sally," naming some person the child knew in camp. The responses to this type of question were categorized into various expressions of attitude.

The clearest finding is that handicapped children themselves refer less often to such matters as locomotion, physical ability, and occupational activities. They also refer less often to interpersonal relations with people outside the family, and even other members of the family except the mother, to whom they refer oftener than non-handicapped children. They refer more to handicap itself, and are more prone to general negative comments and to concerns with the past.

Preceding this study, Richardson and his colleagues (1961) had investigated much more specifically the attitudes of people to different kinds of handicap. They presented line drawings of six different children to a large sample of subjects. The pictures included a non-handicapped child, one in a wheel chair, one on crutches, one with an arm amputated at the elbow, one with a facial disfigurement, and one obese. The subjects were merely asked to rank order the pictures in terms of how well they liked the people.

It turned out that there was considerable consensus in the rankings. The normal child was ranked highest, then followed the wheel chair child, the child on crutches, the amputee, with the facial disfigurement next to lowest and the obese child as least liked. The stereotyping of the differently handicapped children is rather shocking, particularly since the pictures were not extreme. The facial disfigurement was not very noticeable, just a one-sided smile that carries little of the emotional impact of a live person with a serious facial disfigurement.

Similarly the picture of the obese child was not nearly as extreme as it might have been. The fact that there was so much agreement about the rankings suggests that the pictures were really just symbols of a type of handicap and that there are clearly stereotyped attitudes toward differently handicapped people. It is hard to believe that the ranking is specific to these pictures; in fact the same results were obtained with a set of pictures of girls as well as boys. These questions need to be resolved with further research. Would a mere verbal label elicit the same results?

Not all groups agree on this ranking. Richardson and his colleagues (1963) predict that children from lower economic level Jewish and Italian families will not rank obesity and facial disfigurement as low as the normative sample because of the high value put upon food in those cultures, and particularly for the Jews, the fact that facial characteristics are such a salient hallmark of Jewishness. These predictions were confirmed, although the Italian sample still rated obesity at the bottom of the rank order. Three other samples,an institutionalized psychiatric group, an institutionalized mentally retarded group also ranked the pictures in atypical orders, but there is no obvious reason for the rankings. A non-institutionalized mentally retarded group did not even achieve a consensus among themselves in the ranking.

These differential likings are presumably reflected in the actual treatment of handicapped children in naturalistic situations. From social psychological research indicating the negative effects of physical weakness and lowered self esteem on peer popularity, one might easily predict that handicapped people would be rejected. There is much scattered, largely anecdotal evidence, that a handicap does indeed influence social reactions, but it does not indicate that this reaction can be described simply as rejection. That element enters into it, but sympathy is aroused; guilt and embarrassment are also commonly present. Ambivalence is probably the best single term to describe people's reaction to handicaps. Unfortunately there

are all too few careful systematic studies of the actual interpersonal behavior of handicapped people.

All of these studies represent the application of well established methods of social science to the study of handicap. One of the clear principles of social judgment is the "halo effect" first labeled by Thorndike (1920). A person who is judged as able and competent in one area of activity is generally over-rated in the desirable direction in many traits that are not realistically related to the first. Thus for example, people who have high status socio-metrically are characterized as generous, enthusiastic and affectionate (Lemann and Solomon 1952). Also some personality traits seem to be more central than others in terms of influencing social judgments. Asch for example found that if a list of personality traits was given to a judge, the adjective "warm" or "cold" seemed to be central. If two lists of traits were identical except for a change from warm to cold, the whole picture created by the list was markedly changed whereas a change in other traits was less influential. (Asch 1946). Also the trait listed first in the list tended to be more influential than traits further down in the list (Shapiro and Tagiuri 1958).

This tendency for some aspects of the person, or for those aspects that are most salient to influence the total picture of the personality seems certainly to affect the social judgments made of handicapped people. In fact there is considerable basis for believing that psychologists and educators have fallen into this same type of error in treating the I.Q. as if it were a general index of effective adaptability. If one takes a large battery of intelligence test items, it is generally established that there is a positive correlation among those items, and that this "g" factor can be measured by various intelligence tests. What seems to be the erroneous assumption is that effective social functioning is highly correlated with intelligence, and this assumption has many consequences for the treatment of such people. Let us examine some of the data about mentally retarded people to illustrate this general point.

As Zigler (1967) has argued cogently there is good reason to think I.Q. is distributed rather peculiarly over the general population. There is a hump in what looks otherwise like a normal distribution, and this hump is at the lower end of the distribution. This shape of the distribution is an established fact and has been interpreted various ways (Jensen 1969, Zigler 1967). Zigler's interpretation is that there is a group of mentally retarded people, with a mean I.Q. below 50, probably about 35, which represent those cases where there is a clear physiological defect. Cretinism, phenylketonuria, mongolism are all examples of such a clear defect. Usually the consequences are quite severe,and there is little question but that such a severe defect often prevents the person from adapting effectively to the complexities of everyday life. The case for mongolism being so serious a handicap is not so clear and will be discussed more fully later.

If one removes these cases from the distribution, Zigler argues that the remainder would show a good normal distribution and that the mentally retarded people at the bottom end of this normal distribution represent those unfortunate people in whom so many of the factors influencing intelligence, (genetic, prenatal, perinatal and post natal environment) have happened to be negative that they represent the case of the unfortunate gambler who was betting on red when twelve blacks came up in a row. He argues that they are just as much a part of the normal distribution as those people with I.Q.'s above 130 or those with I.Q.'s near 100---------which does not mean that their I.Q. scores are in error or that the individual's score will be readily changed. Changeability of I.Q. is a separate problem, not inherently part of the present argument.

There is no question but that the I.Q. has historically been geared to the selection of children who will do well or poorly in school. Binet and Simon's original test was an attempt to select children who would do poorly in school (Binet and Simon 1905). While some attempts have been made to broaden the base of intelligence tests beyond academic aptitude, they have not been very successful.

As a consequence the children testing below 60 or 70 in I.Q. find school a great crisis period. They are vulnerable to the demands of school. During the preschool period they do not fail spectacularly to adapt to the social demands of their environment, and after they have left school they may function quite effectively.

"Graduates" of institutions for mentally retarded children discharged or paroled show a surprisingly normal distribution of outcomes. Many of them married and held down respectable jobs; they showed a fair percentage of people owning their own homes and not being on welfare. Their average socio-economic level is lower than the general average and they are vulnerable to unemployment, but the important point is that many of them function passably outside of an institution whereas earlier they had not been able to function effectively in school--or at least in school related tests (Kennedy 1948, Bijou, Ainsworth & Stockey 1943).

One is reminded of the present argument about the intelligence of black children. Their average deficit on I.Q. tests is well established, but black psychologists argue cogently that the tests were designed to measure the dimensions which are favorable to white children, who go into schools that capitalize on the skills and talents prevalent in white society. The argument is that black children have talents that are not measured by the tests, and frequently do not perform at their maximum capacity in the test situation. The situation is very unclear; it is not established that I.Q. tests are unfair to black children, even black ghetto children, but certainly some black children who do poorly on tests function effectively in non-test situations.

The American Association for Mental Deficiency recognizes this discrepancy between test functioning and social effectiveness in their latest criteria for mental retardation, which includes retardation of more than one standard deviation on I.Q. and also retardation of more than one standard deviation on social adaptability (Heber 1959). Obviously both criteria should be employed in deciding on such a drastic action as institutionalization.

The trouble is, of course, that measures of social effectiveness are very poorly developed by comparison with tests of I.Q. The Vineland Social Maturity Scales was an early attempt to assess this type of functioning, but it leaves much to be desired. Other measures are usually some form of rating an occupational skill or social adequacy.

One problem in developing an effective test of social adaptability is the lack of a clear criterion measure which samples a wide range of social situations. One direction for research is to attempt to assess the child's adaptation to his natural environment. How effectively and by what means does he attain his goals in his environment? Since the goal achievement in the natural environment may be a function of his adaptability, or how well the environment is adapted to him, it also seems desirable to conceive of some sort of social functioning tests, perhaps along the lines used in the OSS assessment program (Murray 1948). The problems to be solved in such a research program are serious ones, but the fundamental problem of measuring effective functioning in naturalistic situations needs very much to be attacked.

Self esteem of handicapped children

This discussion of the social evaluations of the handicapped child of course raises the question of what it does to the child's self-esteem. The belief that handicapped children tend to have low self-esteem is widely held though not clearly established, and in any case the characteristics that ordinarily go along with low self-esteem may or may not hold for handicapped children.

We might begin with a sort of naive psychological view. In the naive psychological belief system, when a person thinks he cannot do something, he will not try to do it. The handicapped child, by definition, cannot do some sorts of things and an essential part of his adaptation is to recognize this fact realistically, but the danger is that the child will generalize his limitations and believe that he cannot achieve any of the goals he wants. Such a general lack of

self regard then prevents him from striving to use a prosthesis perhaps, or searching for a job that is both rewarding and within his capabilities.

It is clear from Richardson's findings that handicapped children, when telling about themselves, say things that reflect their limitations, but it is not possible to be sure what of these limitations are realistic and what are unnecessarily self imposed, or unnecessarily imposed by his parents. Once again the actual observation of the activities of handicapped children would provide very useful information on this question.

There is a wealth of scattered unintegrated research on the psychological correlates of self-esteem. Usually self-esteem is measured by a direct questionnaire, sometimes by asking the child to report on his ability in a number of specific areas (Sears & Sherman 1964), or sometimes by a Q-sort in which the subject judges his own traits and also his ideal. The discrepancy between the two is a measure of lack of self-esteem. In general the findings indicate that people with low self-esteem are high in the need for social approval (Janis & Field 1959) and thus vulnerability to social influence. There is a general tendency to find that low self-esteem is correlated with various measures of maladjustment and neuroticism (e.g. Leary 1957), but in many studies the relationship is curvilinear, with both excessively high and low esteem being related to lack of social adaptability. In the case of handicapped children, this relationship may resemble the opposed tendencies to deny the handicap or to be devastated by it. Perhaps the form of defense again the handicap reflects the individual's self-esteem before the handicap for Cohen (1959) has suggested that level of self-esteem is related to the choice of defense mechanisms.

In view of the many methodological and theoretical problems in the study of self-esteem, careful work on handicapped children might be theoretically valuable in social psychology as well as useful for understanding such children.

If it is true that the major adjustment problem facing the handicapped child is

the combination of other people's reaction to his handicap, and his own self-esteem in the face of it, the question arises whether handicapped children should be segregated into special homogeneous groups and given training adapted to their handicap or should be kept in normal social institutions and integrated as much as possible with non-handicapped children.

Some people point to the many examples where chlldren are teased by their classmates, where they must compare themselves to non-handicapped people all of the time and such people argue that this is both unkind and psychologically damaging to the individual.

The arguments on the other side are for integration. The segregation of special groups of children into special groups, specifically labeled creates exactly the kind of damaged self-esteem that we have been discussing. They argue that freely mixing children of all sorts presents a realistic environment in which the handicapped child can best learn what he can and cannot do and how to cope with his realistic problem. While the incidents of teasing or worse will certainly occur, they are less damaging than segregation. Adults need to be alerted to the possibilities of teaching both the injured child and the one performing the injurious act more desirable ways of dealing with the handicap. Also the presence of handicapped children will be helpful to the non-handicapped children; they too need to know about the existence of handicap and learn how to deal with handicapped people without becoming contemptuous or over-solicitous. The people who support this view are not just sentimentalists; experienced teachers who have seen such integrated groups are among those who favor it, although equally experienced teachers may also disagree.

It is probably clear that the authors are inclined toward the integrated viewpoint. The effects of institutionalization are well documented although not in all sorts of handicapped groups;there is some evidence that institutionalized mentally retarded children progress less well than those kept in the home

community (Sievers & Essa 1962). Furthermore there is a great deal of evidence that institutionalized children show a number of effects of social deprivation, particularly their dependency upon a warm adult when one is available.

But institutionalization is an extreme form of segregation and is not the same as segregation into special classes in school. This question cannot be resolved at present because there is so little evidence on which to base a sound judgment. However the need for research is obvious.

Summary:

In summary this chapter has been devoted primarily to the belief that the most neglected field of study and one of the most promising ones is the actual observations of handicapped children of all kinds in their families, in school and in other naturalistic situations. While the problems of doing such research are formidable, they are not insurmountable and the potential yield more than makes up for the difficulties.

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